

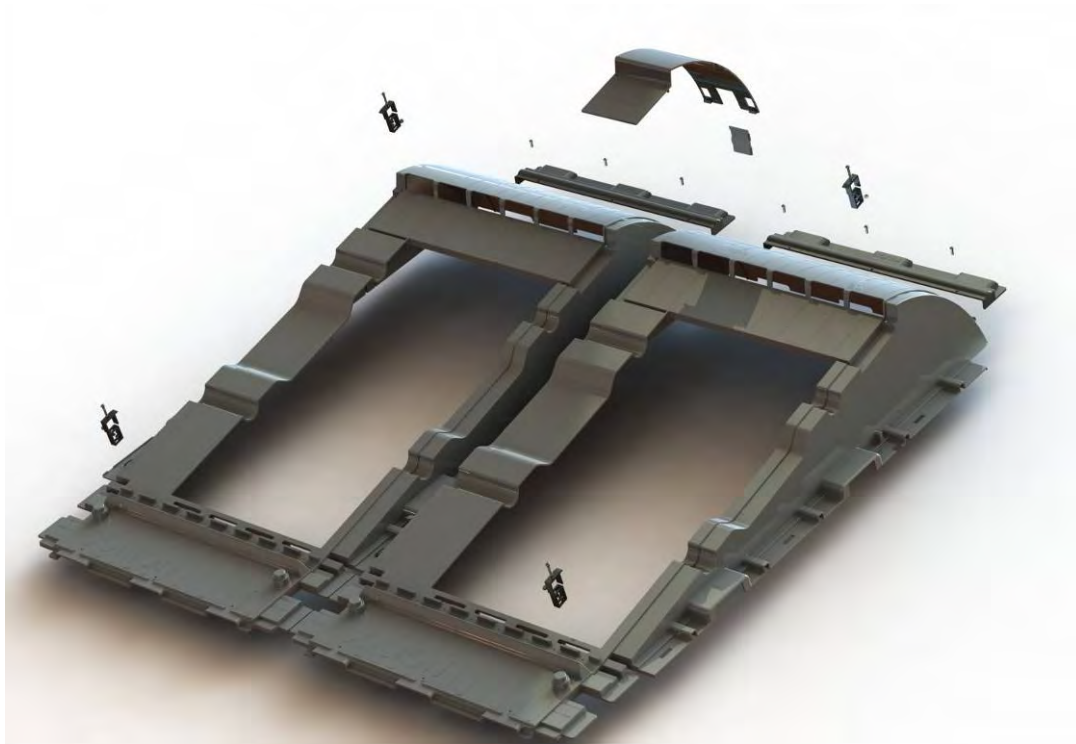
Universal SunMount[®] Installation Manual

For use with any Crystalline PV Panels with dimensions

Length - X-direction: Any length

Width - Y-direction: 960 – 1060mm

Thickness: 34 - 50mm



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The installer is solely responsible for:

- Complying with all the European and national building codes, including any code which may supersede this installation manual.
- Ensuring that all the products purchased from Solion and other suppliers are appropriate for the particular installation and there are no issues of compatibility with the other building materials.
- Use only Solion's parts and authorised distributors parts as specified by the installation manual of Solion. Substitution of parts may void the warranty given below.
- Ensure that all Solion parts and authorised distributors parts as specified by the installation manual are in good condition when they arrive to site before the installation.
- Ensuring that the roof is flat free from peaks, troughs and crusts bigger or deeper than 5cm and the building structure can support the array under all appropriate code level loading conditions.
- Ensuring correct and appropriate values are used to determine the design loads used for the specific installation. Parameters, such as wind speed, static loading, snow loading, exposure and topographic factors should be confirmed with the local building official or a licensed professional engineer.

Solion's Limited Product Guarantee

Solion will guarantee the buyer at the original installation site that any of the Universal SunMount components purchased from Solion shall be free from structural defects in material and performance as referenced in the Solion installation manual, for a period of 20 years.

This guarantee applies from the date when the installation of the Product at the Site is complete. Buyer may transfer this guarantee to subsequent owners, or if the Buyer is a contractor to the property owner.

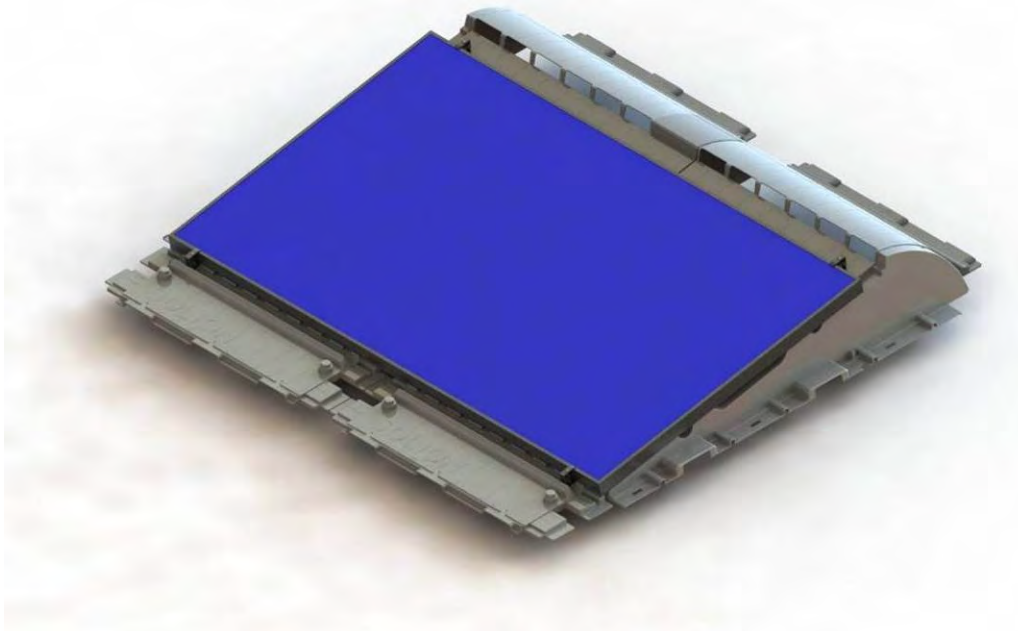
In this guarantee, the term "Buyer" refers to the original buyer and any subsequent transferee of which Solion has advance notice and a proof of purchase is required.

This Limited Guarantee shall be void if

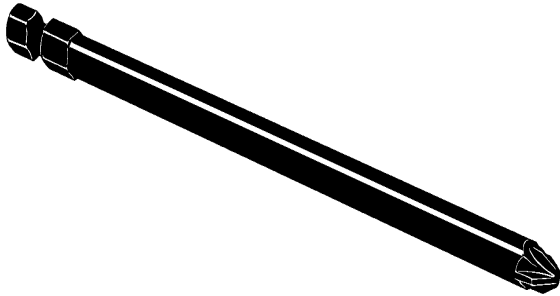
- (1) Installation of the Product is not performed in accordance with Solion installation manual instructions.
- (2) If the Product has been modified, repaired, or reworked in a manner not previously authorized by Solion in writing.
- (3) The Product is installed in an environment for which it was not designed, each as determined by Solion sole discretion.

This Limited Guarantee covers only the Product, and not PV modules, electrical components and or wiring used in connection with the Product or any other materials not provided by Solion. This Guarantee does not cover damage to the Product that occurs during its shipment, storage, and installation or from force majeure acts including natural disasters like storm, hurricane flood, or fire, earthquake, or criminal acts. If, within the Guarantee Period, the Product shall be proven in Solion sole discretion to be defective, then Solion shall repair or replace the defective Product, or any part thereof, at Solion option. Any such repair or replacement does not cause the beginning of new guarantee terms, nor shall the Guarantee Period of this Limited Guarantee be extended. Solion aggregate liability under this Limited Guarantee shall not exceed the original Purchase Price of the Product. Buyer shall bear all costs of shipment or transportation related to the repair or replacement of the defective product. Such repair or replacement shall be Buyer's sole remedy under this Limited Guarantee and shall fulfil all of Solion obligations with respect to this Limited Guarantee

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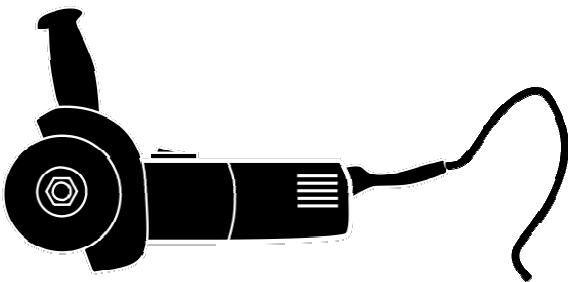
1- Required tools for installation



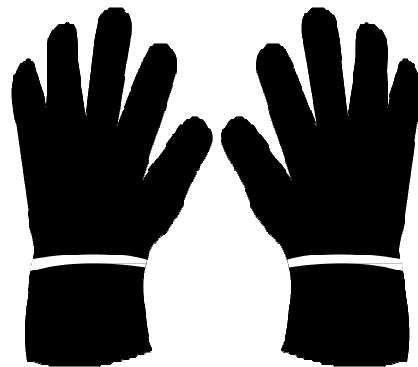
Pozi Drive 2



Drill



Right angle grinder fitted with a diamond cutting disk or any other saw blade or rotary saw blade cutter, to cut SunMount module to the right



Gloves for handling SunMount which could develop sharp corners

Please use low torque settings to drill the thread forming screws into the plastic. Avoid using high torque setting as this will rotate the screw after it has been drilled into the boss. This will damage the plastic and it will leave the screw with a very poor grip into the SunMount.

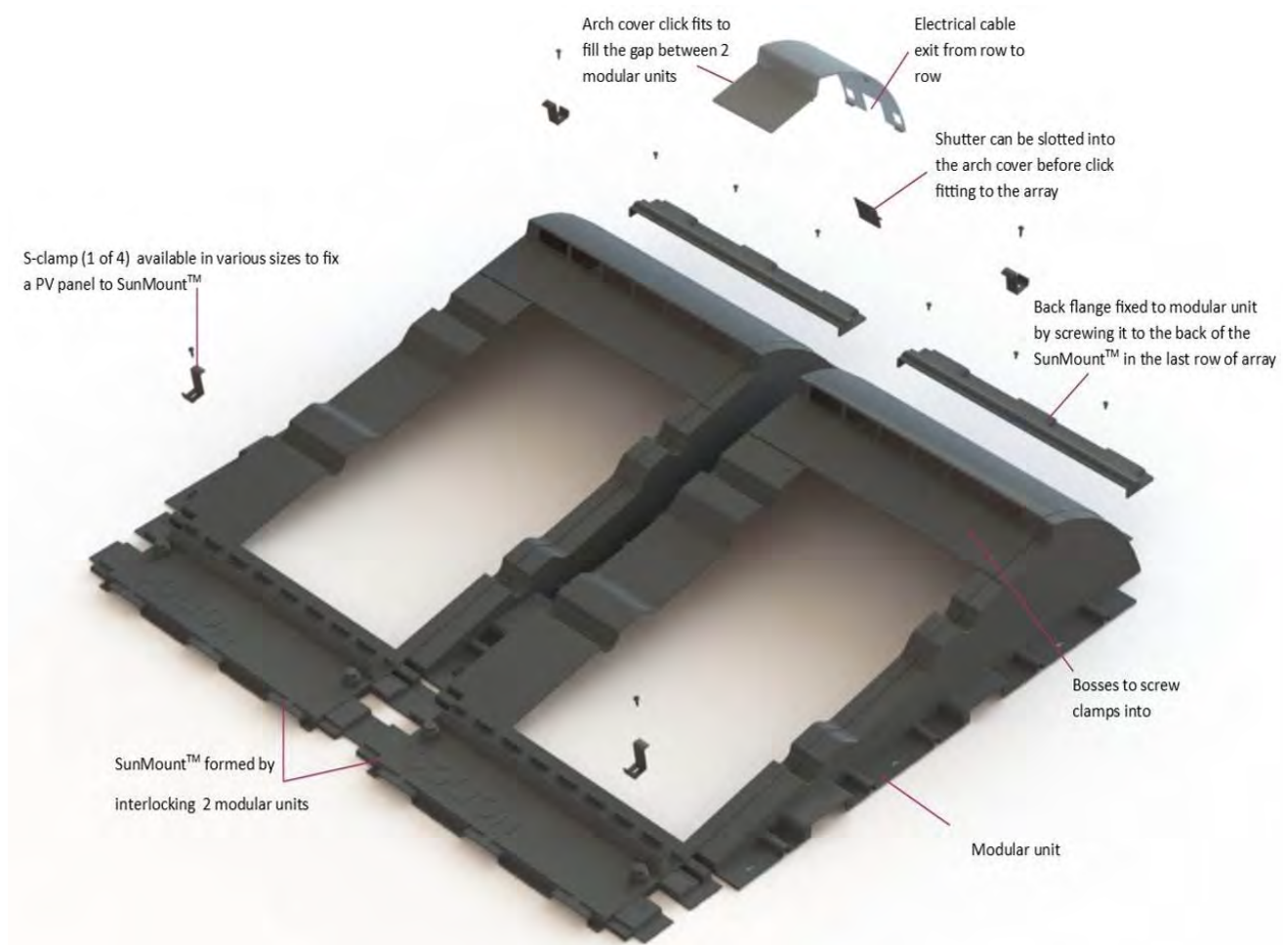
2- The Universal SunMount (USM) features

The Universal SunMount fits most of the PV panel sizes sold in the market today. It can fit any PV panel length as long as the width of the PV panel is in between 960 – 1060mm.

An S-shape clamp with a spacer has been designed with different heights to accommodate PV panels thicknesses of 34 – 50mm. Please refer to table 2, page 26 for Clamps + spacer VS PV panel thickness.

The Universal SunMount is a unique design comprising a modular unit, where one SunMount is made out of two interlocked modular units. Extra single modular units can be added as required to suit the length of the number of PV panel used in one row.

Figure 1 shows the Universal SunMount modular unit and its most important features.



3- Important Notes before starting the mechanical Installation:

3.1 – Edge distance between PV array and roof edges.

As you plan the PV installation on a roof, always leave a gap between the PV array and all roof edges and its corners, in accordance with *the Euro code 1, part 1-4: General Actions- Wind action and the UK National Annex of the Euro code 1*, as in the two equations and the figure below

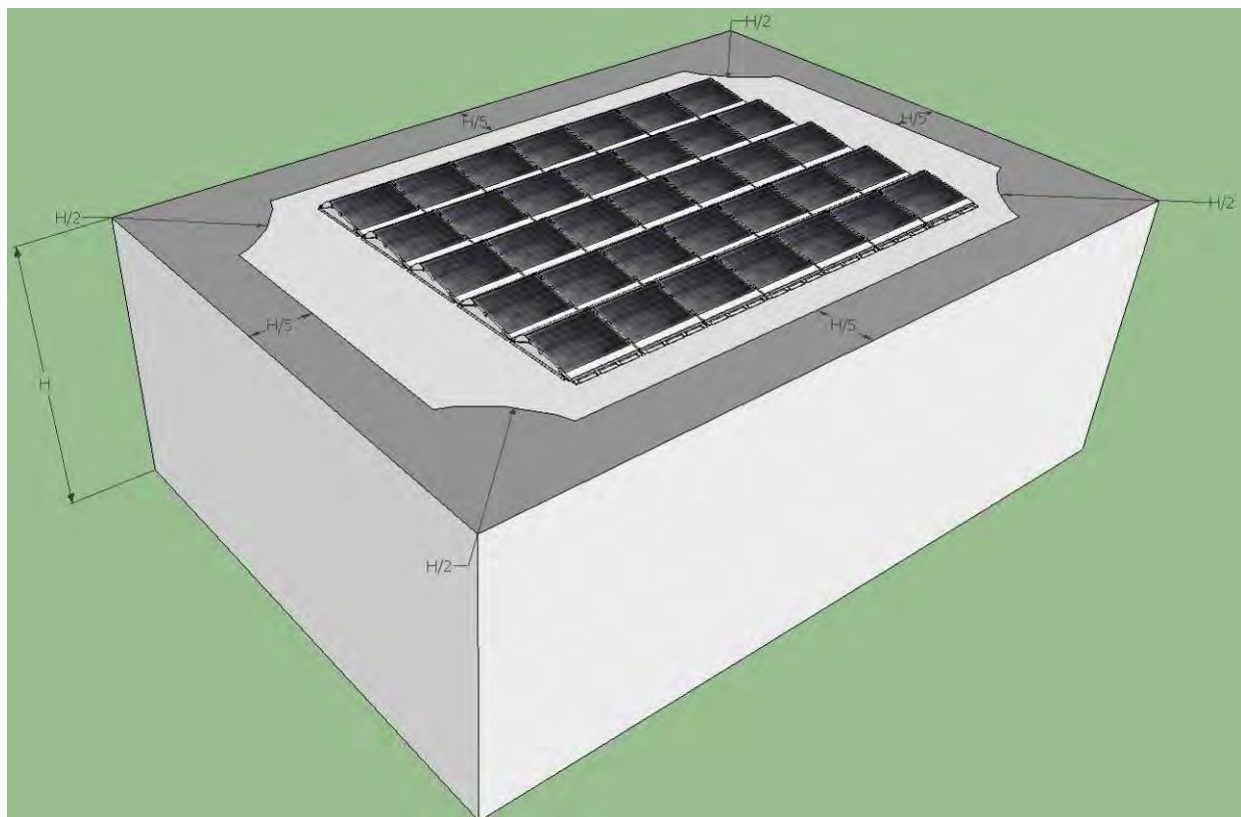
PV array distance from all roof edges = $(2 \times H)/10 = H/5$

PV array distance from all corners = $(2 \times H)/4 = H/2$

H is the height of the building including a parapet wall.

In case of parapet wall on the roof, the edge distance is taken between the PV array and the inner wall of the parapet.

Please note that in the drawing below, the distance between roof edges and line of the white area is the minimum recommended distance between PV array and roof edges & corners. The bigger the distances between the array and roof edges/corners, the lower the wind loading forces.



3.2 – List of compatible sealants with roof materials

The sealant is to be applied under the flat flanges of the SunMount for the edge units of the PV array only. Apply a sealant bead of no less than 6mm wide.

The sealant integrity should be checked every 10 years (in time with usual roof maintenance). For Bitumen roofs with chipped stones, the sealant integrity should be checked every three years.

Some of the sealants will have primer component to apply before applying the sealant and some have not, please check the sealants list which suitable for different roofing materials:

- **Bitumen, Asphalt, PVC, EPDM, Metal, material Roofs:** Dow Corning 758 Sealant. You can buy this sealant directly from Solion Ltd. Please apply Primer 84 before applying the sealant to the roof in case of Bitumen and Asphalt roofing materials.
- **Sarnafill membrane roof:** SarnaPlast 2235. Obtained directly from Sika UK or Sika roof contractor
- **Bauder membrane Roof:** Bauder Sealant (one part low modular sealant) and Bauder Sealant Primer. Both obtained directly from Bauder UK or Bauder roof contractor.

3.3 - Applying primer (barrier layer) to the edges of the PV array

Please Note: This procedure is to be followed only in the case that the roofing material requires a primer barrier before the application of the sealant

1. Make sure that the roof surface is clean and free from dirt and water.
2. Mark the outer edge boundaries of the PV array configuration, by drawing a line with a marker pen. One of the easiest and quickest ways is by placing the SunMounts to make the outer edge boundaries of the array.
3. Apply the primer to the surface with a wide paint brush over the marked boundary line (make sure that the primer covers 50-60mm on each side of the line).
4. Leave the primer to dry for an hour before applying the sealant. Meanwhile you can place and interlock the SunMounts in the chosen configuration.



(1)



(2)



(2)



(2)



(3)



(3)



(3)



(3)



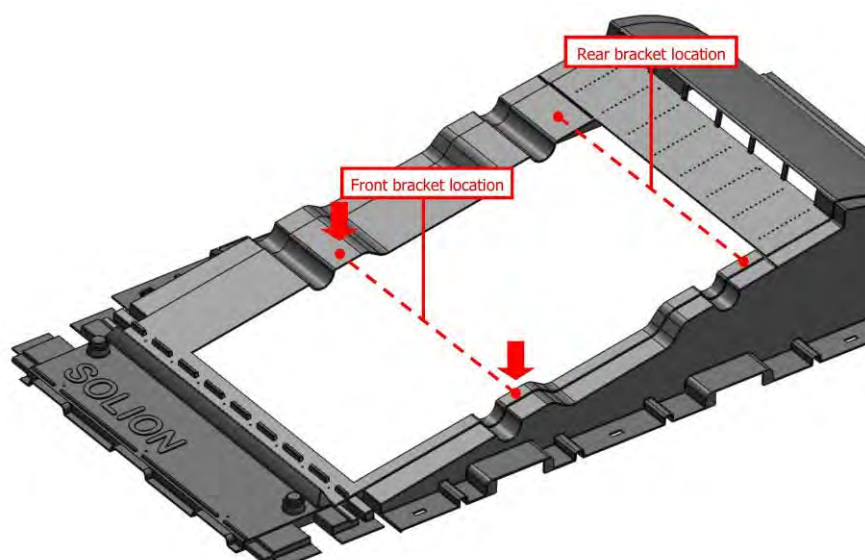
(4)

3.4 – Ballasting the SunMount

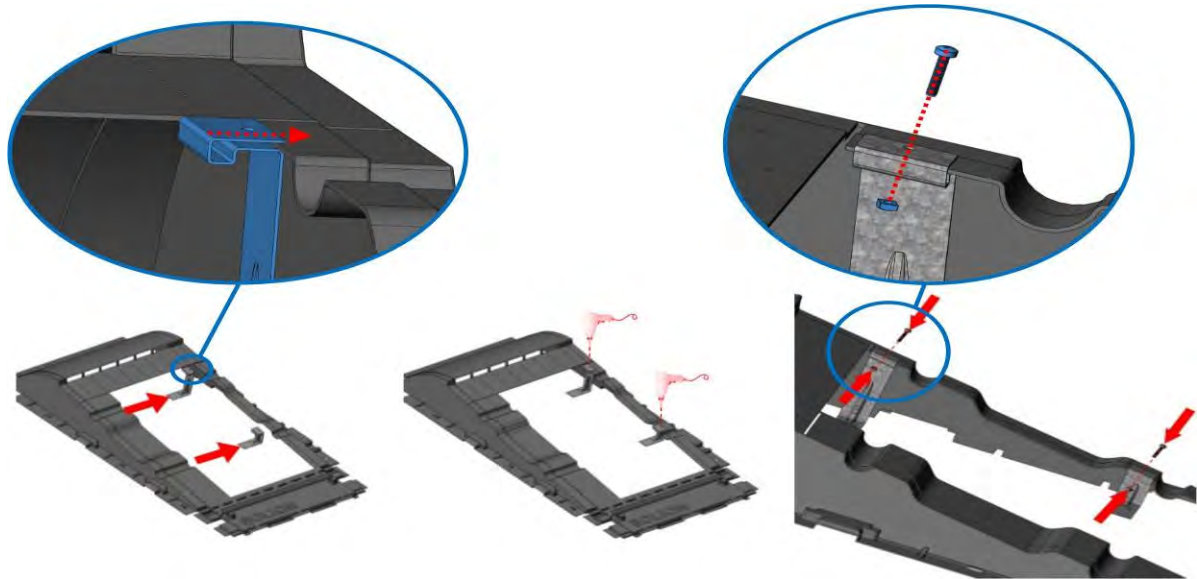
Before starting the installation procedure, please determine the amount of ballast required for your particular installation.

The Universal SunMount has an internal ballasting system. The ballast is mostly applied to the outer units forming the edge of the PV array. Please attach the ballast before placing the PV panels on the SunMount (i.e. before step 15 in the mechanical installation steps of the next section).

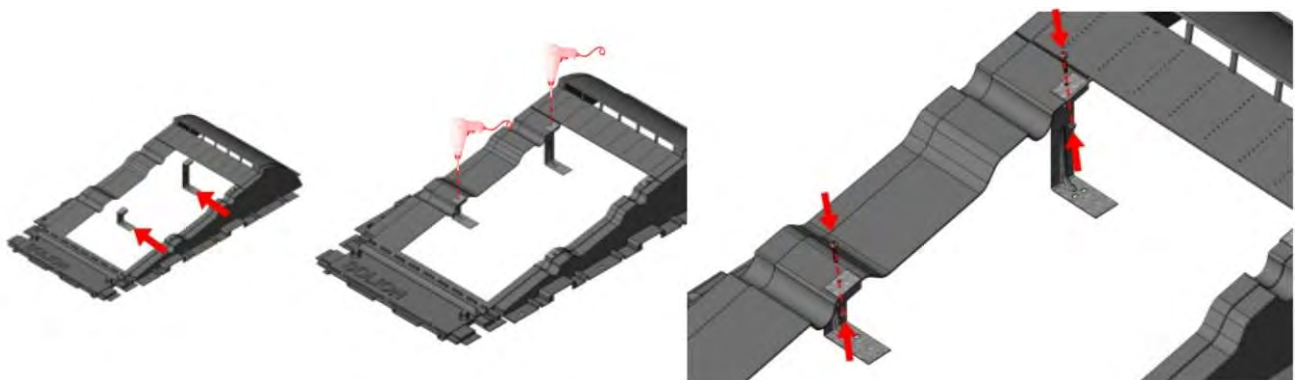
The internal ballast, front or back ballast, consists of 2 brackets attached to the opposite side walls of the SunMount by a screw and a nut. Two stainless steel cable ties are then inserted into the slots of the bracket feet and tied around the concrete slabs. Please see the drawings and explanations below of how to attach the ballast to the SunMount:



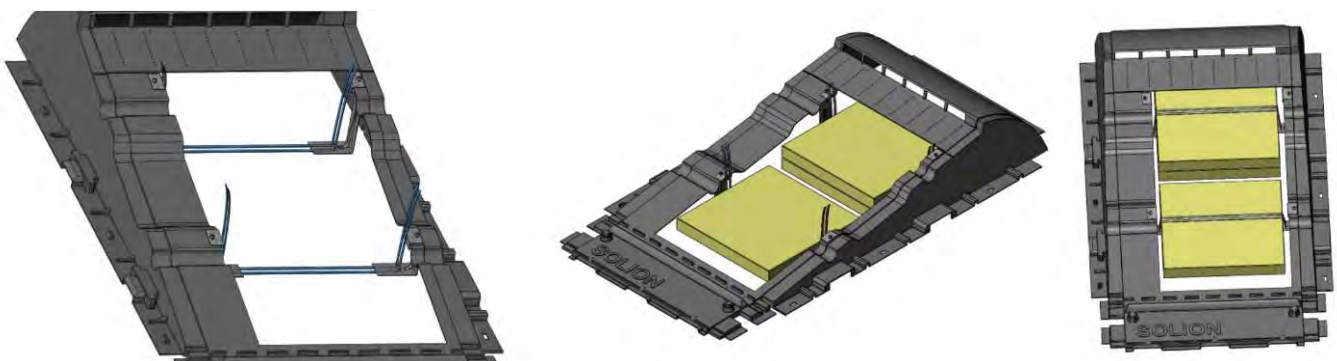
Once the array is complete and before placing the PV panels on the SunMount, place the ballast brackets (depending on whether you are using a back or front ballast or both) on the red point locations as shown in the drawing above.



Slot the metal bracket onto the lip RHS side wall, drill a hole in the plastic wall (using 6.1mm drill bit) through the top hole of metal bracket and use the 6mm screw with the nut to fix the bracket to the side wall as shown in the figure above.



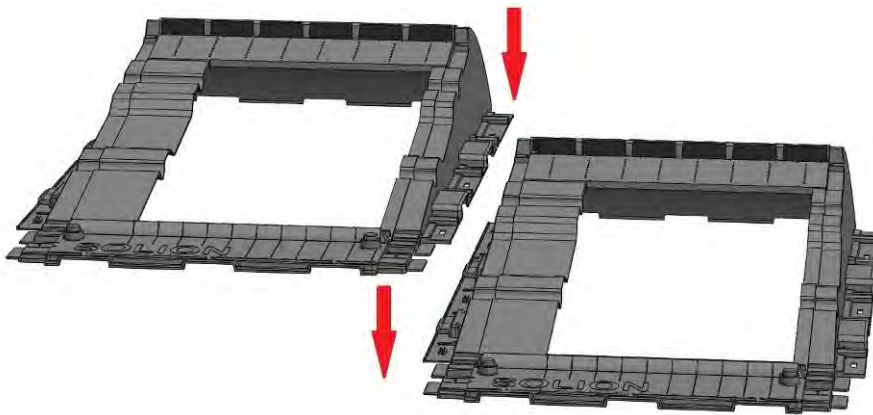
Fix the LHS brackets as above.



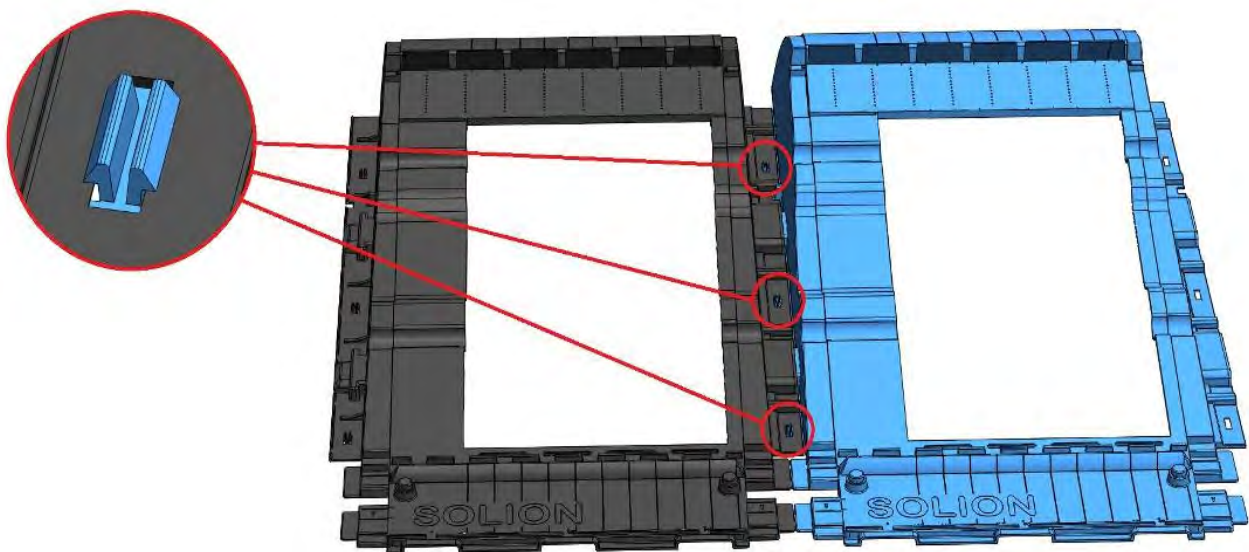
Place two stainless steel cable ties through the slots of the RHS bracket's feet and then into the slots of the LHS bracket. Place the concrete slabs over the cable ties (use either 450 x 450 x 50mm or 500 x 500 x 50mm concrete slab dimensions). Finally tie the cable tie NOT too tightly over the concert slabs (please do not cut off the access cable tie once tightened). You can use a maximum of 2 concrete slabs of 50mm thick for the back ballast and 1 concrete slab of 50mm thick for the front ballast per 1 USM.

4- Mechanical installation steps

1. From table 1, select your PV panel size to establish how many modular units are required to make a row length. The table will also establish, whether the total length of the PV panels used will
 - **match exactly** the length of the SunMount row, in which case **NO** cutting action will be required,
 - **Over-hang or under-hang** the row length, in which case, one modular unit will be required to be cut to adjust the length (see step 5, page 11).
2. Starting from right to left, place first one modular unit and then another unit to its left as shown in figure below



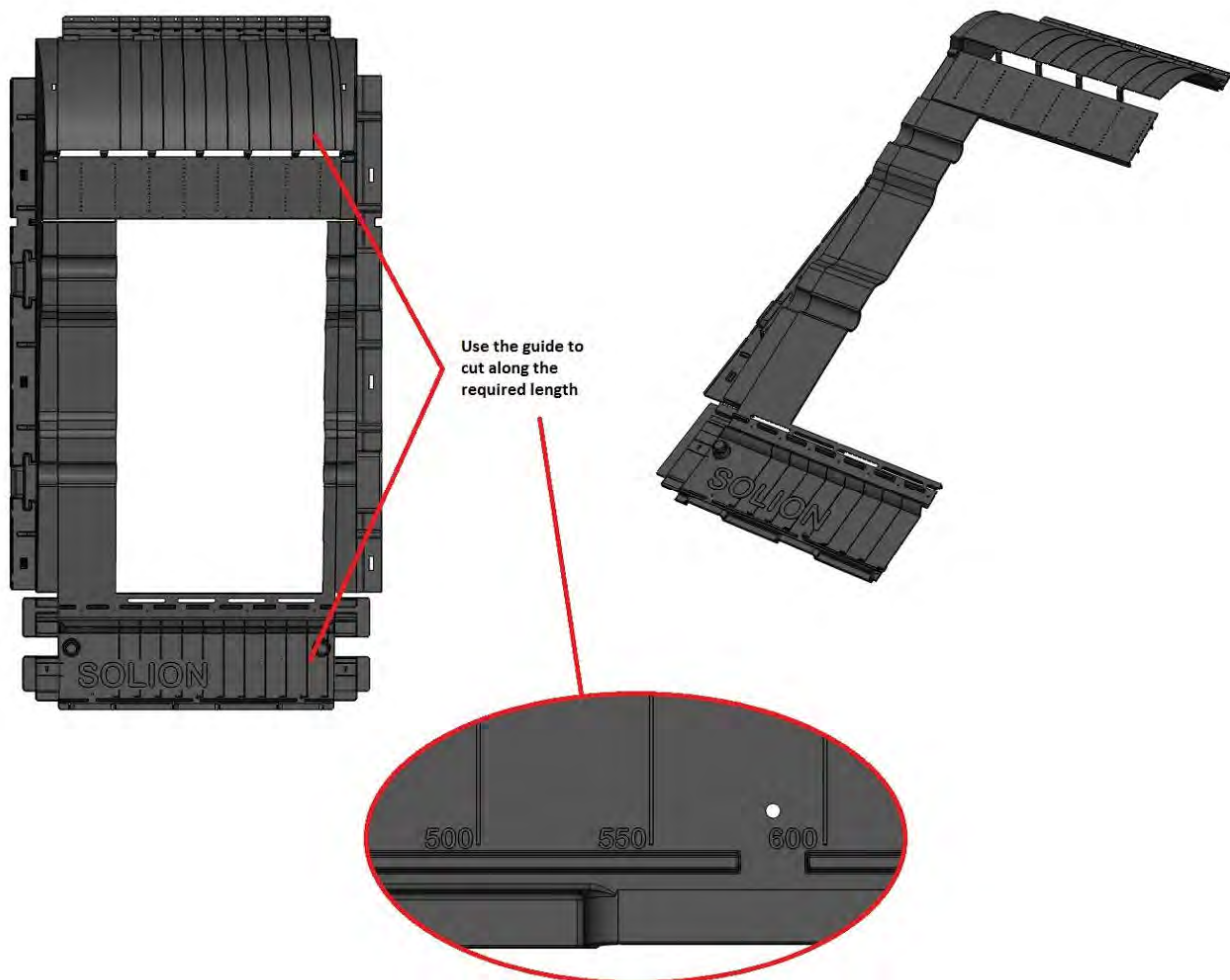
3. Interlock the two units along its flanges, using the three latches as shown in the figure below



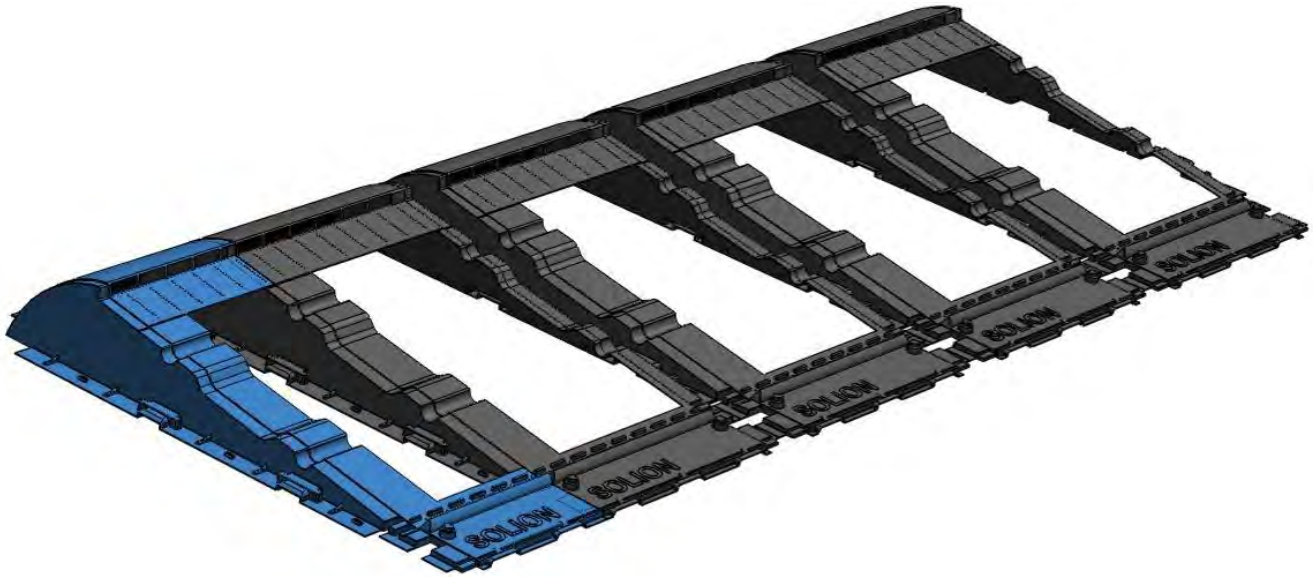
4. Repeat steps 2 & 3 to interlock the required number of units which make up the row length as determined in step 1 and as shown in the figure below



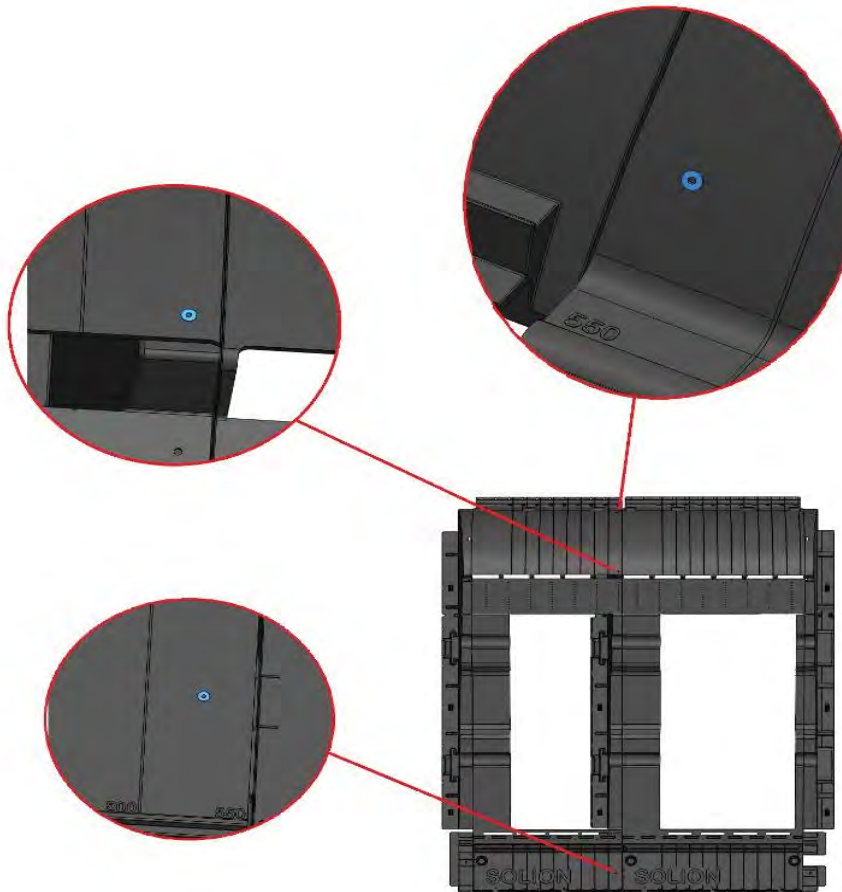
5. If the PV panels length **over or under hang**, as determined from step 1, then table 1 will show the required length to be cut for **one modular unit only**. The guide lines on the SunMount will aid the cutting operation to be simple and accurate as shown in the figure below. ***Please note that if a cut unit is required, it should NOT BE INSTALLED AS THE LAST UNIT IN THE ROW – See figure in step 8.***



6. Place the cut unit on the wall of the RHS SunMount as shown below.



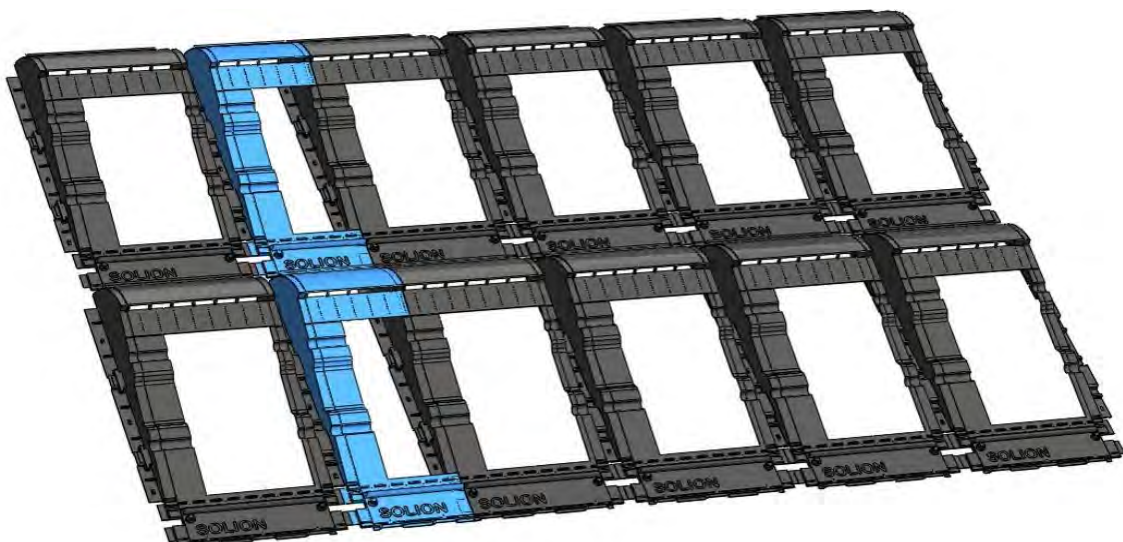
7. Screw the cut units in three places to adjacent RHS unit, using the M6 x 11.6 mm flat head screw (Please use a low torque setting to drill the screws in), as shown in the figure below.
Please make sure to use low torque setting on the drill to stop once the screw is fully engage into the material.



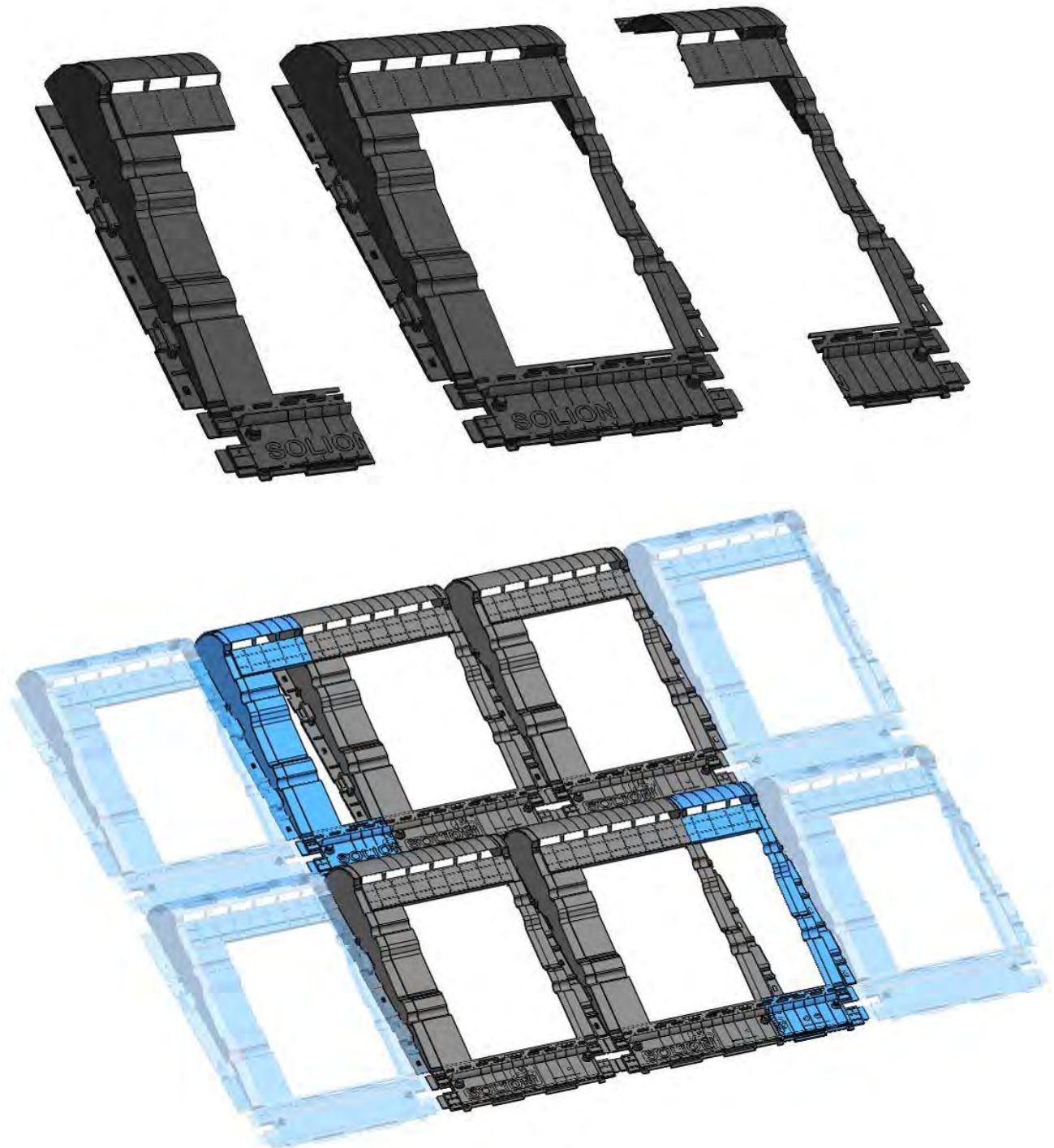
8. Place the last unit on the LHS side of the row as in step 2 and interlock as in step 3. The row length now has the exact length of the PV panels' length.



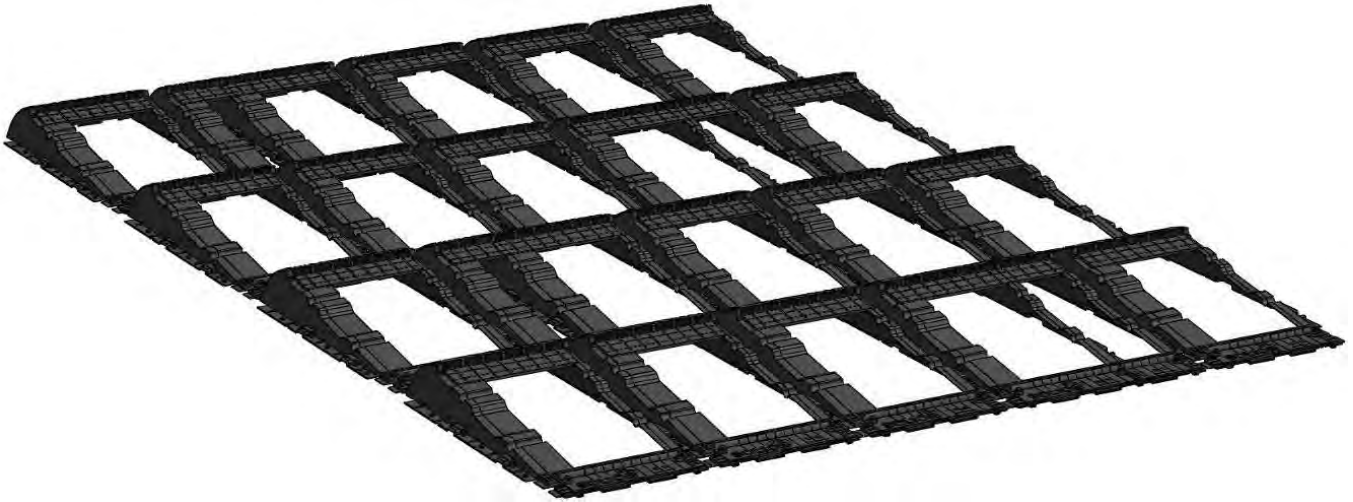
9. To form a second row, overlap the back flange of each unit on the front nose of the last row, screw them together with M6 x 16 mm screws (use a low torque setting to avoid rotation after the screw being drilled into the boss), as shown in the figures below and repeat steps 2 to 8 as before to complete the second row. ***Please make sure to use low torque setting on the drill to stop once the screw is fully engage into the material.***



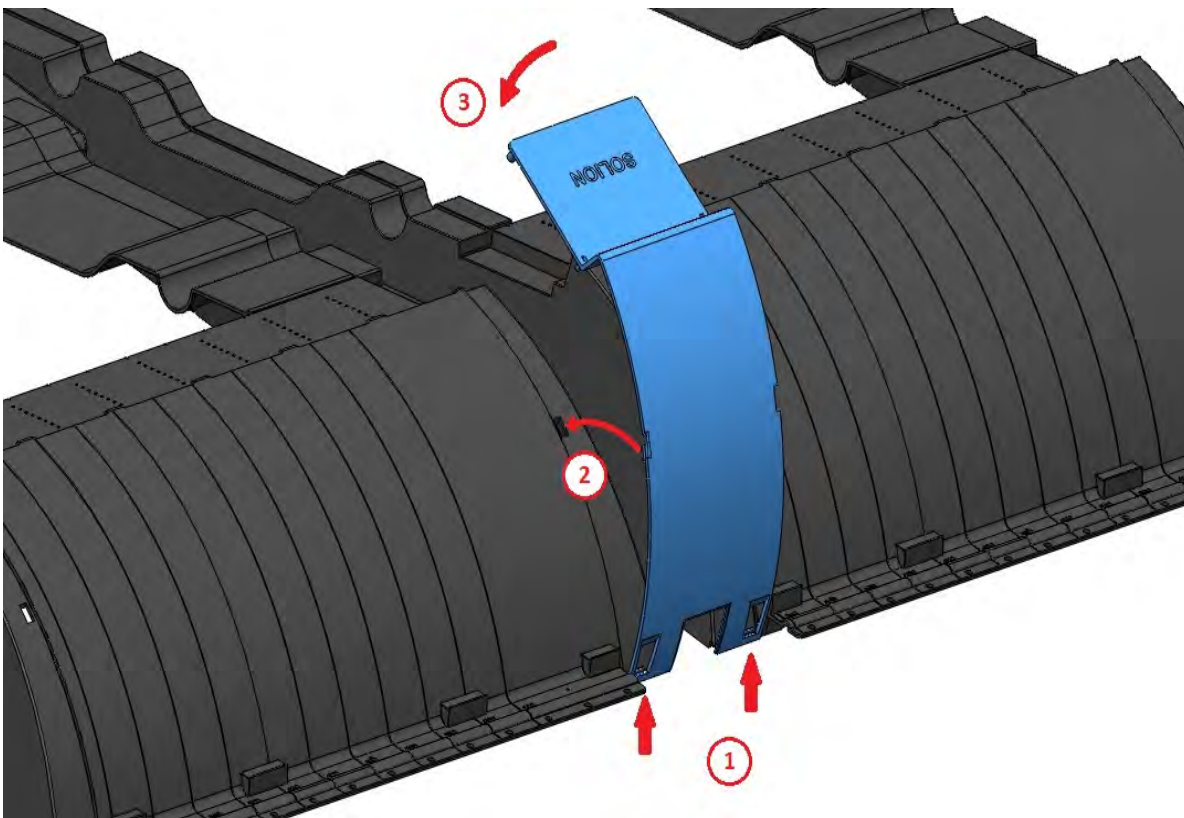
- 10.** In the special case when the modular unit is cut into two equal halves if the LHS cut unit is less than half the width of a unit, then the remaining RHS can be trimmed *and used in the next row as in the two figures below*



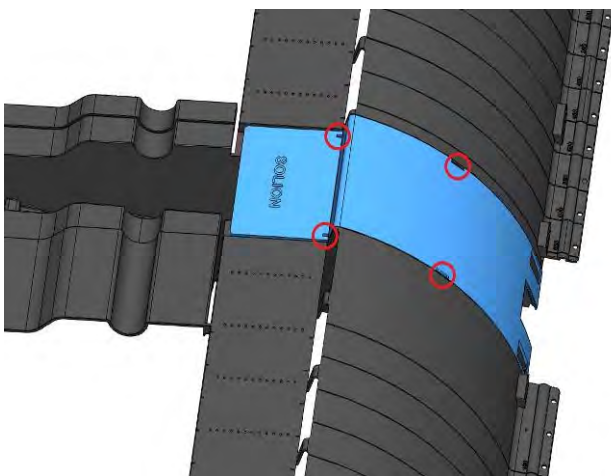
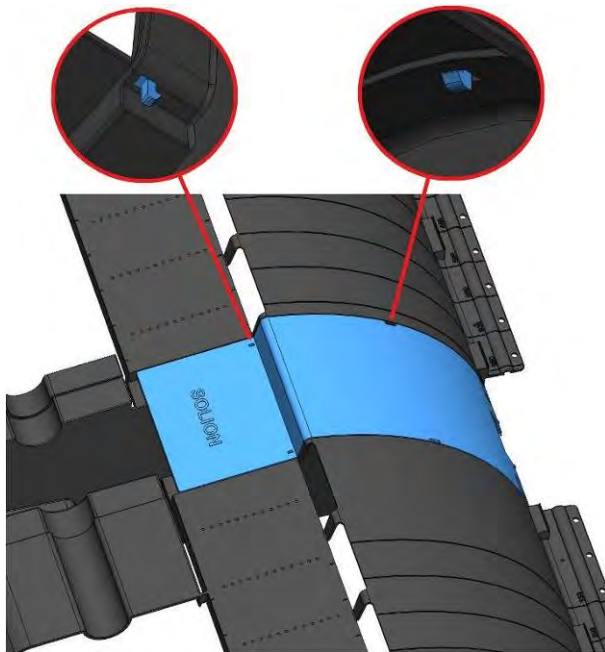
11. Repeat steps 2-10 until the array shape is complete, as shown in the figure below



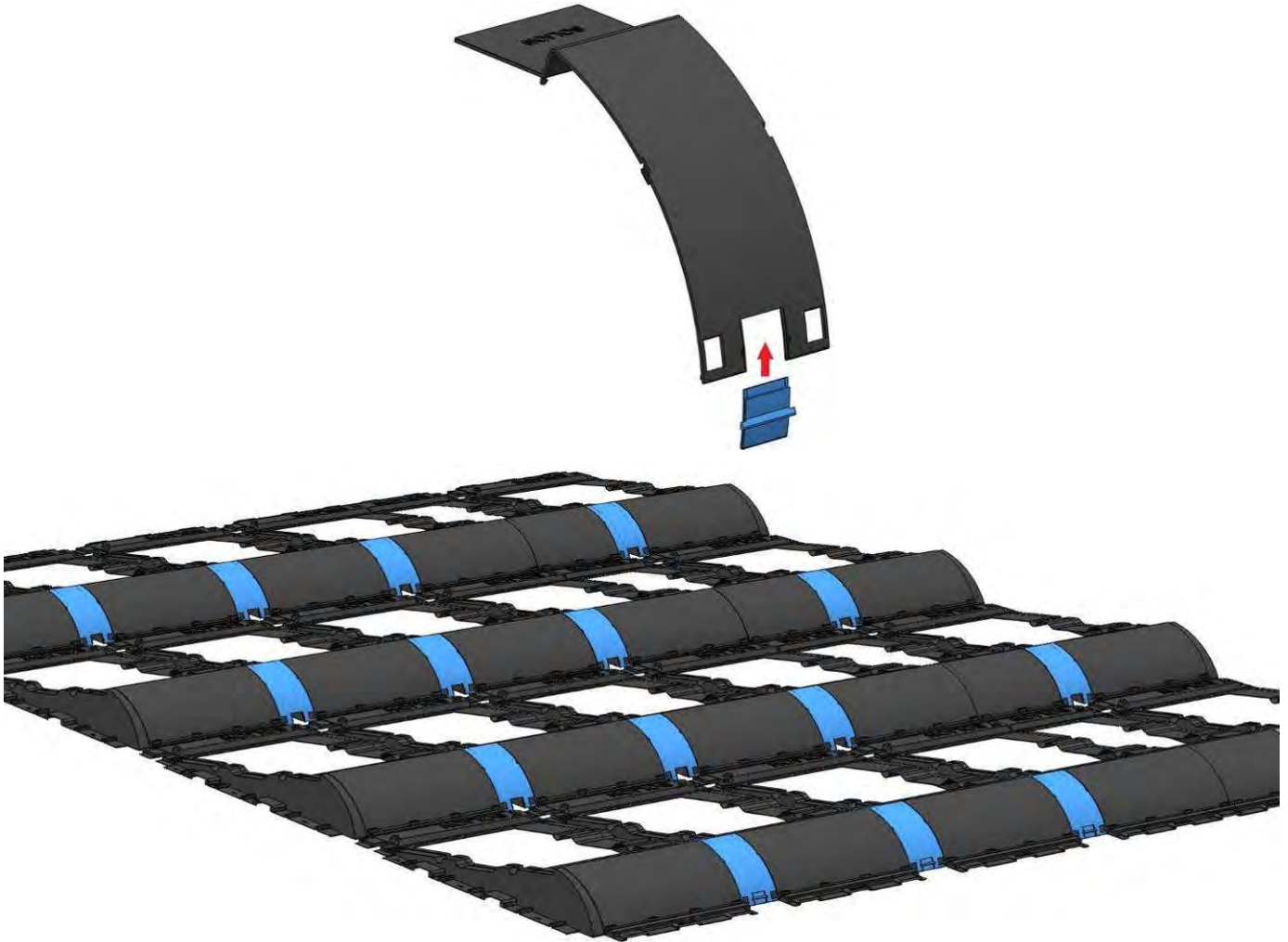
12. Attach the cover strip to cover the gap between the adjacent SunMount modular units, as shown in the figure below



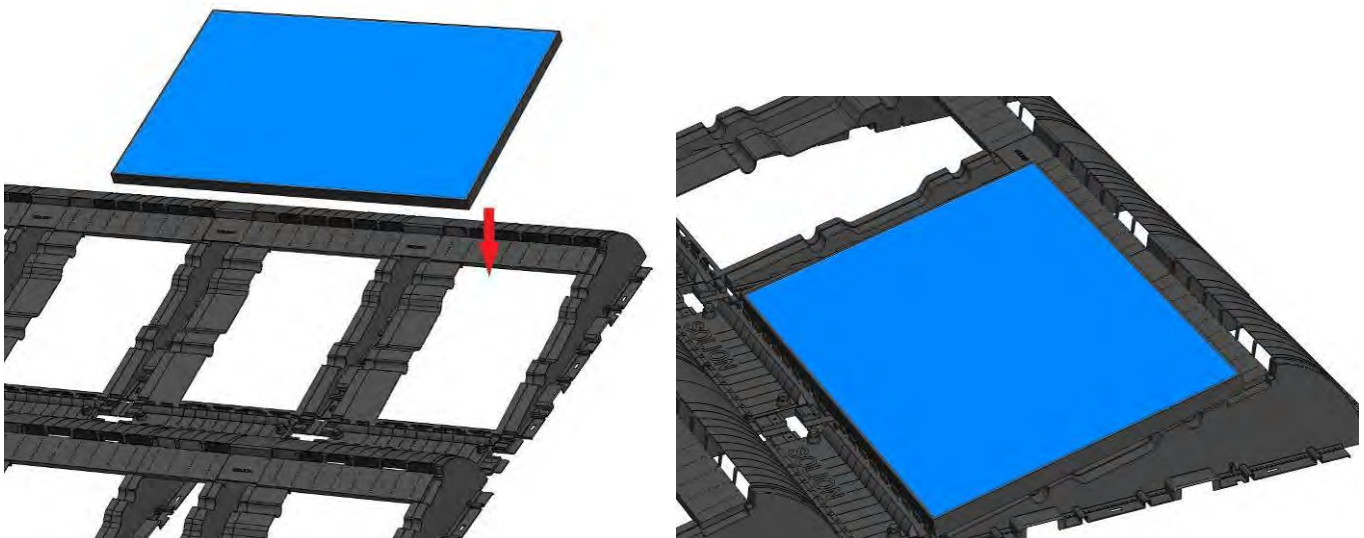
13. The curved strip can be attached to the SunMount by first attaching the U-clip to the bottom arch beneath the SunMount as shown in the circular figure below. Once the U-clip is engaged, click fit the middle latches of the strips into the slots located at the back curve of the SunMount and finally clip the latches at the top of the SunMount as shown in the figures below. Please note that the gap at the bottom of the curved strip can be used to pass PV electrical cables from one row to the next.



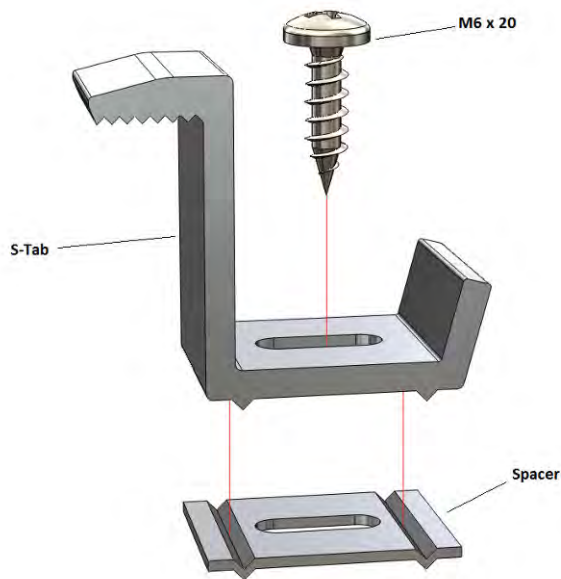
14. For the back row of the array **only**, a shutter can be slotted into the curved strip before click fitting it into the SunMount as shown into the figures below



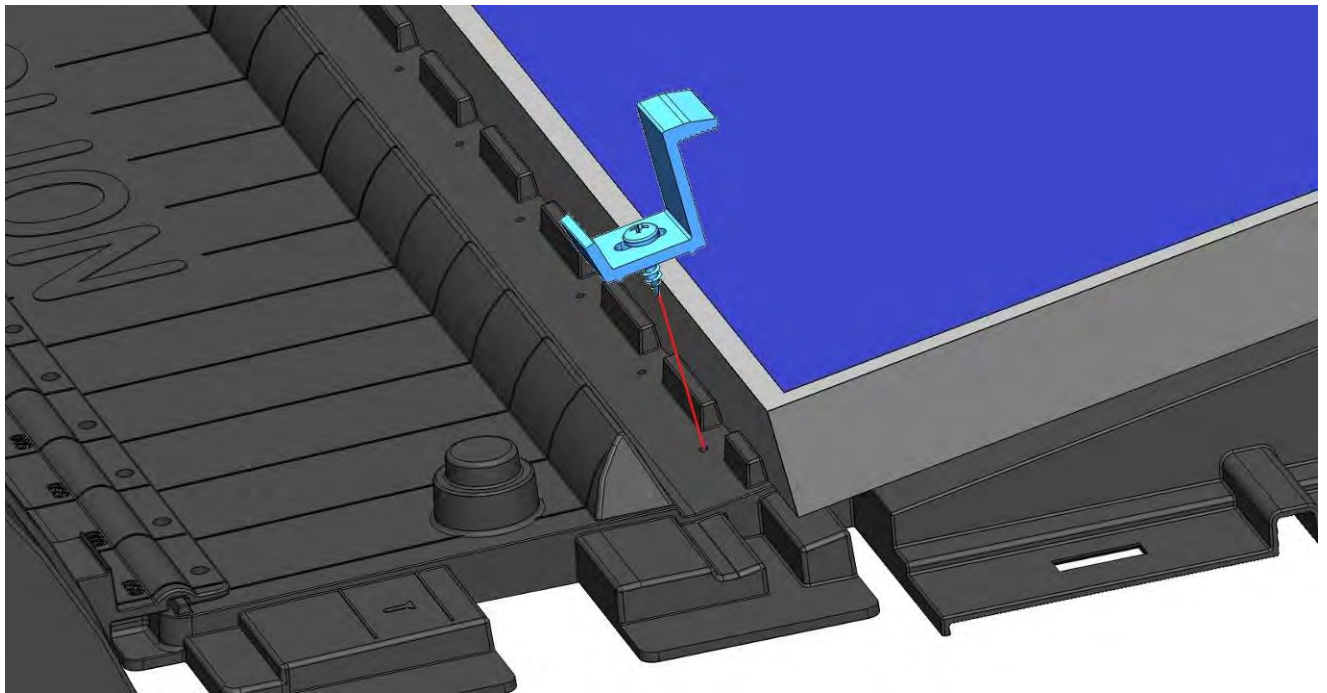
15. Place the PV panels on the SunMount as shown in the figures below

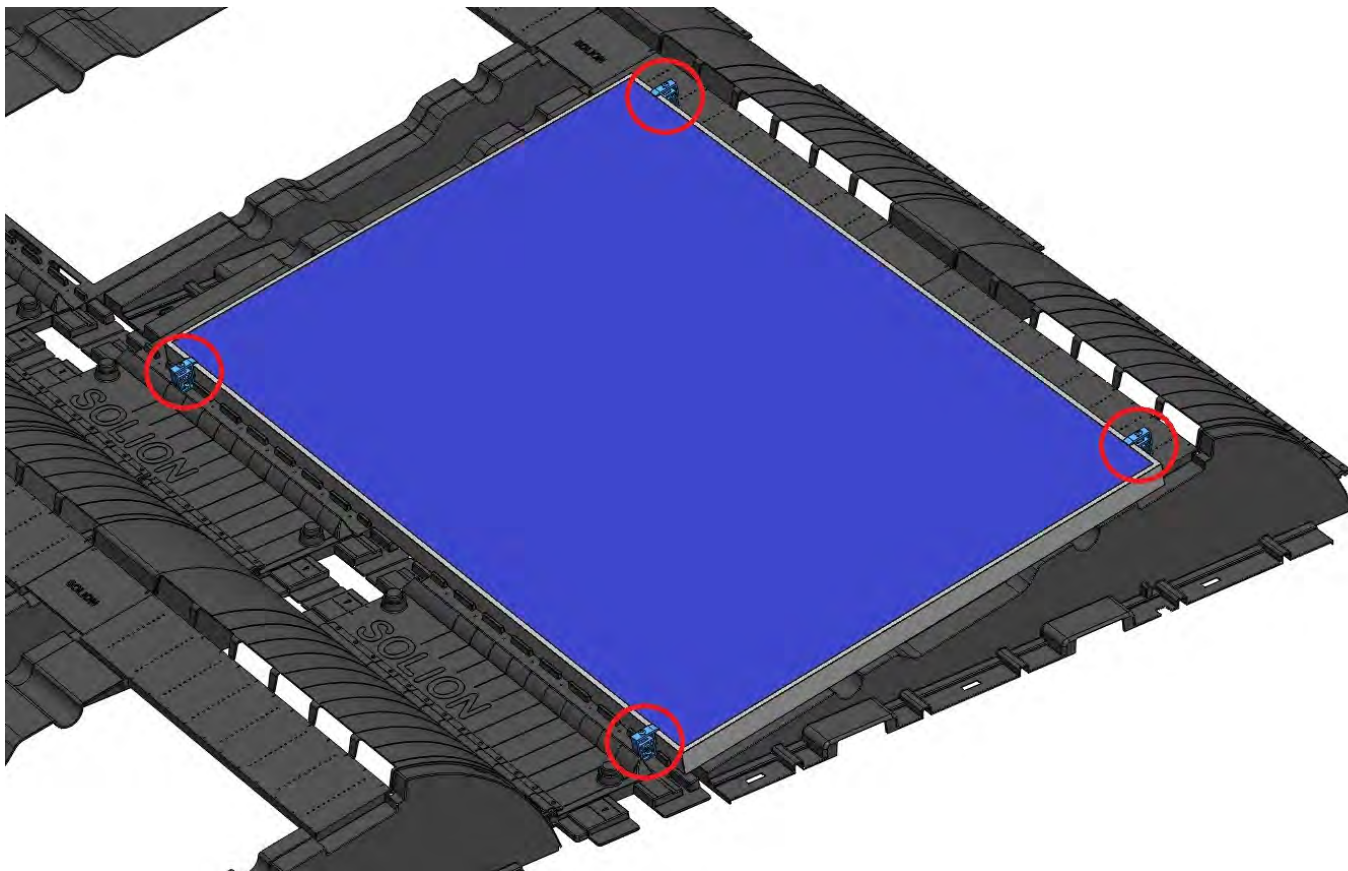


16. The S- shape fixing clamp fits 4 different PV panel thicknesses sizes, they are 35, 40, 45 & 50mm. A spacer, as shown in the figure below, can be used to fit different PV panel thicknesses in between these sizes quoted above. Please table 2 for the use of number of clamp and spacer vs. PV panel thicknesses. Please use *low torque settings to drill the thread forming screws into the plastic. Avoid using high torque setting as this will rotate the screw after it has been drilled into the boss.*



17. Place four clamps for each PV panel to secure to the SunMount as shown in the figures below

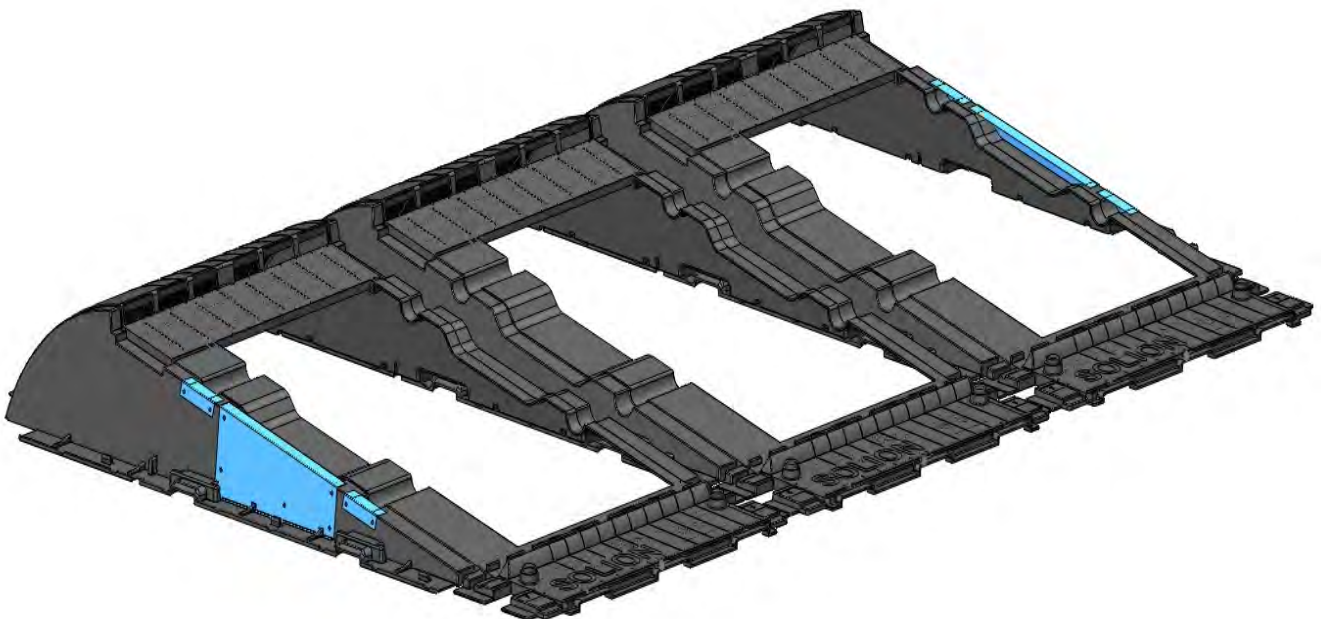
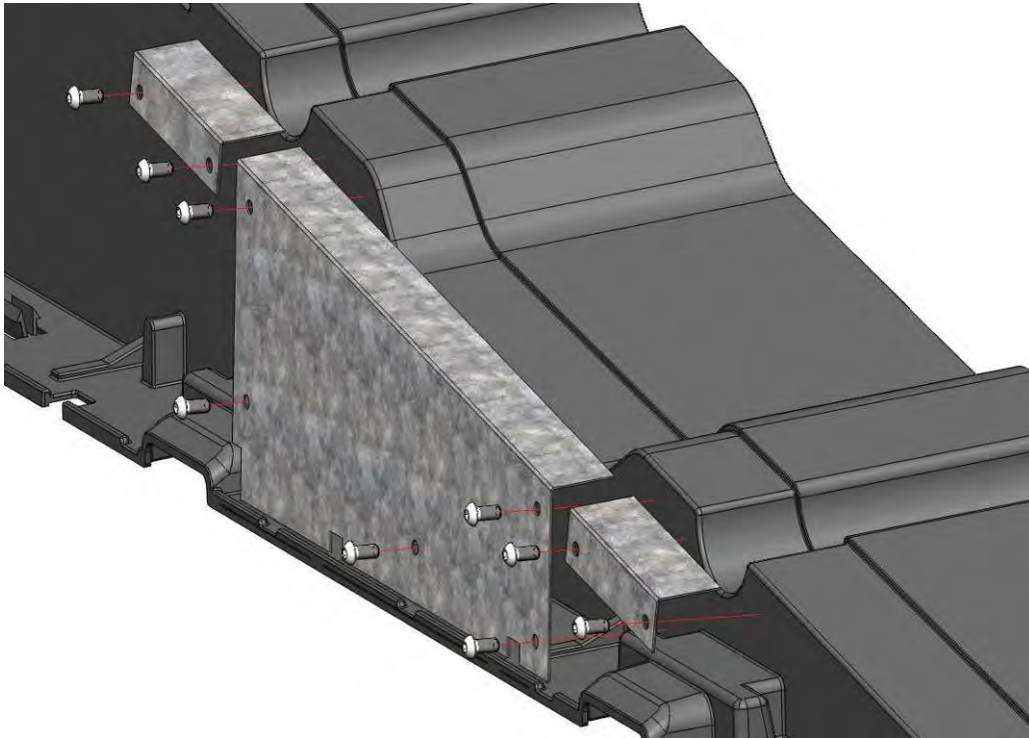




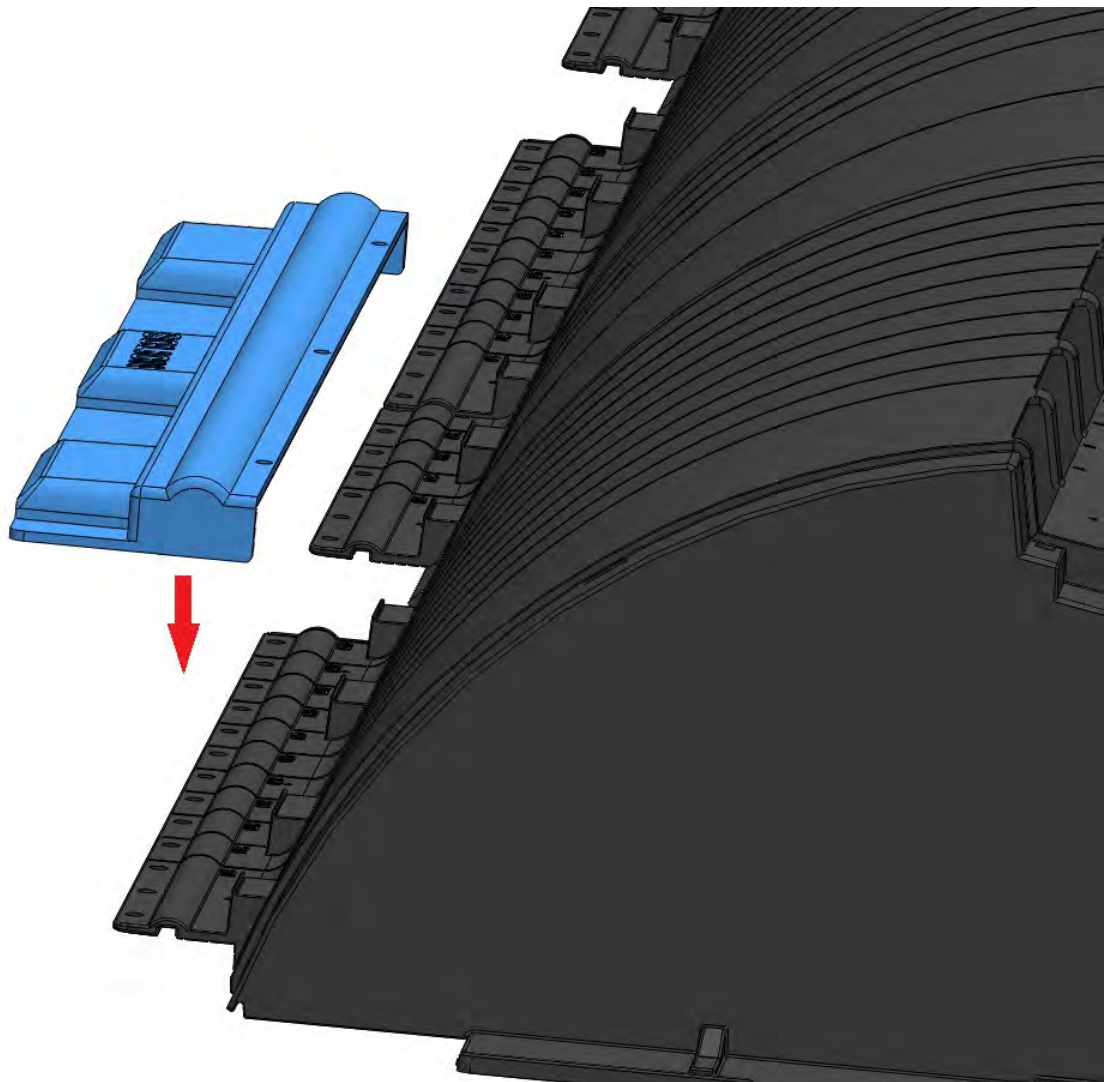
18. Repeat step 17 until all the PV panels are installed and fixed on the SunMount array as shown in the figure below



19. For the LHS & RHS edge SunMount units of the array only, attach the side cover strip and the cable hole strip (only for unused cables holes) as in the two figures below. Use the M6 x 11.6 mm screws to attach the cover strips

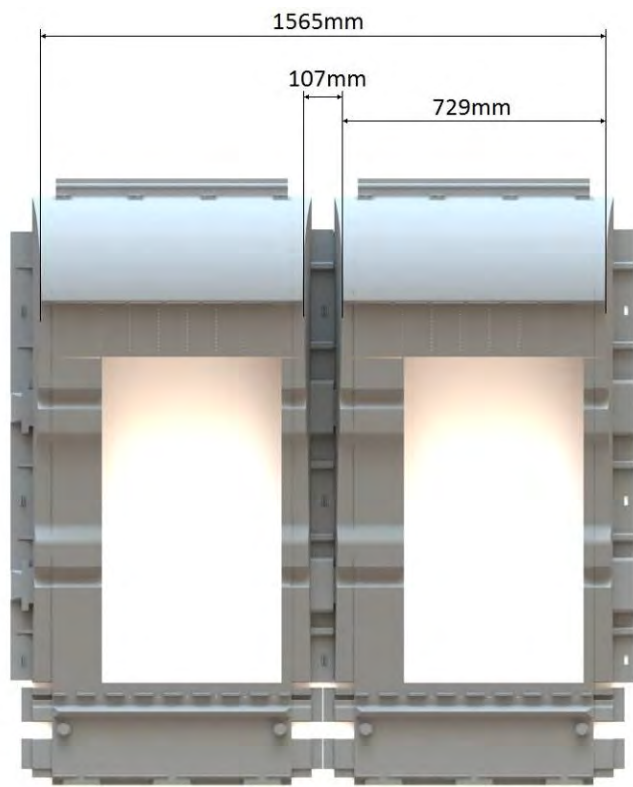


20. For the **back row** of the array only, place the back flanges over the back of the SunMount and screw it down to the SunMount using the M6 x 11.6mm screws as in the figure below. **Please note, the back flange can be cut to the required length to fit a cut modular unit and then screwed as mentioned above.**

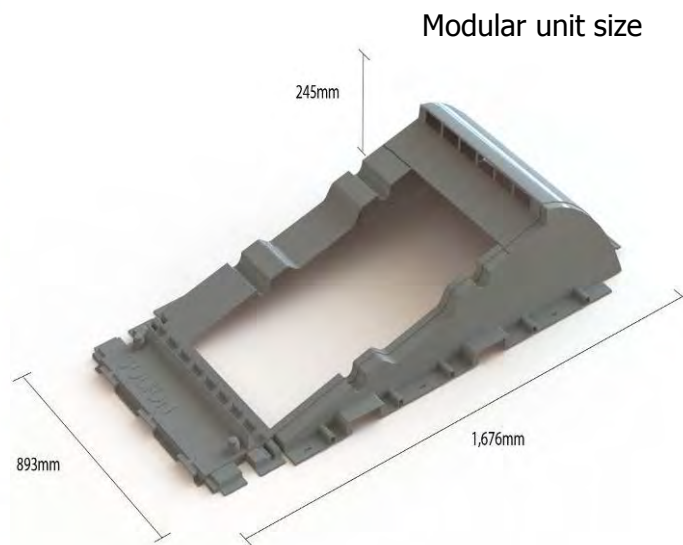


This complete the instruction for the Mechanical Part of the Installation

SunMount and array dimensions



Full unit size



Modular unit size

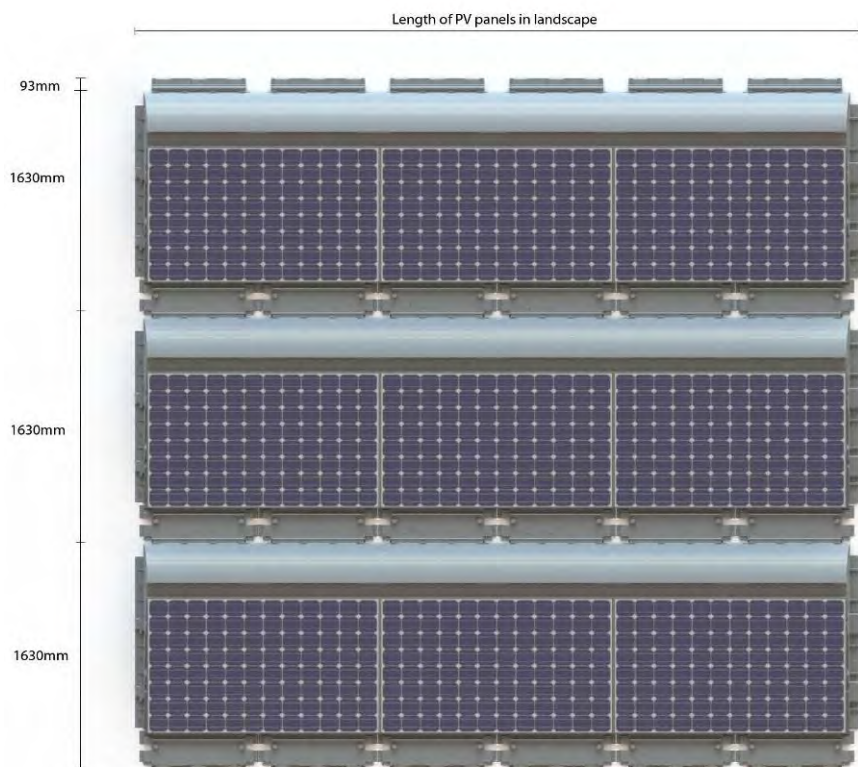


Table 1: The PV panel length selector

Select the PV panel size to be used from Table 1 to establish **how many modular units are required to make a row length**. The table will also establish if the total length of the number of the PV panels used will **match exactly** or **over/under hang**

- **match exactly** the length of the row, in which case **NO** cutting action will be required,
- **Over-hang or under-hang** the row length, in which case, **one modular unit only** will be required to be cut to adjust the length.
-

The figure below explains the different parameters seen in table 1

Panel Length (mm)	Number of Panels in Row			Number of Universal SunMount Units	Amount of Overhang in mm, Negative Numbers Indicate Underhang
	1	2	3		
1300	2 570	4 200	5 -170		
1310	2 580	4 220	5 -140		
1320	2 590	4 240	5 -110		
1330	2 600	4 260	5 -80		
1340	2 -225	4 280	5 -50		
1350	2 -215	4 300	5 -20		
1360	2 -205	4 320	5 10		
1370	2 -195	4 340	5 40		
1380	2 -185	4 360	5 70		

Colour	300	Red = Requires Cut
Code	-185	Green = Good Fit

The **colour red** means one modular unit only will be **required to be cut** by the stated length number highlighted in red in the table.

If the **colour is green** then **No cutting action** is required even if there is an overhang or under hang.

Example: The PV panel length is 1680mm and 12 PV panels to be used to make up the row.
How many SunMount units are required and will one unit require cutting?

Solution

The intersection of the panel length column at 1680 with the number of panel row of 12, are the numbers "25 **225**" as shown in table 1.

Number 25 signifies the number of the SunMount modular units required to make this row length.

Number 225 signifies one SunMount modular unit needs to be cut by 225mm from the LHS as in step 5 of the mechanical installation steps.

Panel	Number of Panels in Row																							
Length	1	2	3	4	5	6	7	8	9	10	11	12												
1300	2	570	4	200	5	-170	7	295	8	-75	10	390	11	20	13	485	15	115	16	580	18	210	19	-160
1310	2	580	4	220	5	-140	7	335	8	-25	10	450	11	90	13	565	15	205	16	-155	18	320	19	-40
1320	2	590	4	240	5	-110	7	375	8	25	10	510	12	160	13	-190	15	295	16	-55	18	430	19	80
1330	2	600	4	260	5	-80	7	415	8	75	10	570	12	230	13	-110	15	385	16	45	18	540	20	200
1340	2	-225	4	280	5	-50	7	455	9	125	10	-205	12	300	13	-30	15	475	17	145	18	-185	20	320
1350	2	-215	4	300	5	-20	7	495	9	175	10	-145	12	370	13	50	15	565	17	245	18	-75	20	440
1360	2	-205	4	320	5	10	7	535	9	225	10	-85	12	440	14	130	15	-180	17	345	18	35	20	560
1370	2	-195	4	340	5	40	7	575	9	275	10	-25	12	510	14	210	15	-90	17	445	19	145	20	-155
1380	2	-185	4	360	5	70	7	-220	9	325	10	35	12	580	14	290	15	0	17	545	19	255	20	-35
1390	2	-175	4	380	5	100	7	-180	9	375	10	95	12	-185	14	370	15	90	17	-190	19	365	20	85
1400	2	-165	4	400	6	130	7	-140	9	425	11	155	12	-115	14	450	16	180	17	-90	19	475	21	205
1410	2	-155	4	420	6	160	7	-100	9	475	11	215	12	-45	14	530	16	270	17	10	19	585	21	325
1420	2	-145	4	440	6	190	7	-60	9	525	11	275	12	25	14	-225	16	360	18	110	19	-140	21	445
1430	2	-135	4	460	6	220	7	-20	9	575	11	335	12	95	14	-145	16	450	18	210	19	-30	21	565
1440	2	-125	4	480	6	250	7	20	9	-210	11	395	13	165	14	-65	16	540	18	310	19	80	21	-150
1450	2	-115	4	500	6	280	7	60	9	-160	11	455	13	235	14	15	16	-205	18	410	20	190	21	-30
1460	2	-105	4	520	6	310	7	100	9	-110	11	515	13	305	14	95	16	-115	18	510	20	300	21	90
1470	2	-95	4	540	6	340	8	140	9	-60	11	575	13	375	15	175	16	-25	18	-225	20	410	22	210
1480	2	-85	4	560	6	370	8	180	9	-10	11	-200	13	445	15	255	16	65	18	-125	20	520	22	330
1490	2	-75	4	580	6	400	8	220	9	40	11	-140	13	515	15	335	17	155	18	-25	20	-205	22	450
1500	2	-65	4	600	6	430	8	260	9	90	11	-80	13	585	15	415	17	245	18	75	20	-95	22	570
1510	2	-55	4	-215	6	460	8	300	10	140	11	-20	13	-180	15	495	17	335	19	175	20	15	22	-145
1520	2	-45	4	-195	6	490	8	340	10	190	11	40	13	-110	15	575	17	425	19	275	21	125	22	-25
1530	2	-35	4	-175	6	520	8	380	10	240	12	100	13	-40	15	-180	17	515	19	375	21	235	22	95
1540	2	-25	4	-155	6	550	8	420	10	290	12	160	13	30	15	-100	17	-230	19	475	21	345	23	215
1550	2	-15	4	-135	6	580	8	460	10	340	12	220	14	100	15	-20	17	-140	19	575	21	455	23	335
1560	2	-5	4	-115	6	-225	8	500	10	390	12	280	14	170	15	60	17	-50	19	-160	21	565	23	455
1570	2	5	4	-95	6	-195	8	540	10	440	12	340	14	240	16	140	17	40	19	-60	21	-160	23	575
1580	2	15	4	-75	6	-165	8	580	10	490	12	400	14	310	16	220	18	130	19	40	21	-50	23	-140
1590	2	25	4	-55	6	-135	8	-215	10	540	12	460	14	380	16	300	18	220	20	140	21	60	23	-20
1600	2	35	4	-35	6	-105	8	-175	10	590	12	520	14	450	16	380	18	310	20	240	22	170	23	100
1610	2	45	4	-15	6	-75	8	-135	10	-195	12	580	14	520	16	460	18	400	20	340	22	280	24	220
1620	2	55	4	5	6	-45	8	-95	10	-145	12	-195	14	590	16	540	18	490	20	440	22	390	24	340
1630	2	65	4	25	6	-15	8	-55	10	-95	12	-135	14	-175	16	-215	18	580	20	540	22	500	24	460
1640	2	75	4	45	6	15	8	-15	10	-45	12	-75	14	-105	16	-135	18	-165	20	-195	22	-225	24	580
1650	2	85	4	65	6	45	8	25	10	5	12	-15	14	-35	16	-55	18	-75	20	-95	22	-115	24	-135
1660	2	95	4	85	6	75	8	65	10	55	12	45	14	35	16	25	18	15	20	5	22	-5	24	-15
1670	3	105	5	105	7	105	9	105	11	105	13	105	15	105	17	105	19	105	21	105	23	105	25	105
1680	3	115	5	125	7	135	9	145	11	155	13	165	15	175	17	185	19	195	21	205	23	215	25	225
1690	3	125	5	145	7	165	9	185	11	205	13	225	15	245	17	265	19	285	21	305	23	325	25	345
1700	3	135	5	165	7	195	9	225	11	255	13	285	15	315	17	345	19	375	21	405	23	435	25	465
1710	3	145	5	185	7	225	9	265	11	305	13	345	15	385	17	425	19	465	21	505	23	545	25	585
1720	3	155	5	205	7	255	9	305	11	355	13	405	15	455	17	505	19	555	21	-230	23	-180	25	-130
1730	3	165	5	225	7	285	9	345	11	405	13	465	15	525	17	585	19	-190	21	-130	23	-70	25	-10
1740	3	175	5	245	7	315	9	385	11	455	13	525	15	595	17	-170	19	-100	21	-30	23	40	26	110
1750	3	185	5	265	7	345	9	425	11	505	13	585	15	-170	17	-90	19	-10	21	70	24	150	26	230
1760	3	195	5	285	7	375	9	465	11	555	13	-190	15	-100	17	-10	19	80	22	170	24	260	26	350
1770	3	205	5	305	7	405	9	505	11	-230	13	-130	15	-30	17	70	20	170	22	270	24	370	26	470
1780	3	215	5	325	7	435	9	545	11	-180	13	-70	15	40	18	150	20	260	22	370	24	480	26	590
1790	3	225	5	345	7	465	9	585	11	-130	13	-10	16	110	18	230	20	350	22	470	24	590	26	-125
1800	3	235	5	365	7	495	9	-210	11	-80	13	50	16	180	18	310	20	440	22	570	24	-135	26	-5
1810	3	245	5	385	7	525	9	-170	11	-30	14	110	16	250	18	390	20	530	22	-165	24	-25	27	115
1820	3	255	5	405	7	555	9	-130	11	20	14	170	16	320	18	470	20	-215	22	-65	24	85	27	235
1830	3	265	5	425	7	585	9	-90	11	70	14	230	16	390	18	550	20	-125	22	35	25	195	27	355
1840	3	275	5	445	7	-220	9	-50	12	120	14	290	16	460	18</									

Panel Length	Number of Panels in Row											
	13	14	15	16	17	18	19	20	21	22	23	24
1300	21 305	22 -65	24 400	25 30	27 495	29 125	30 590	32 220	33 -150	35 315	36 -55	38 410
1310	21 435	22 75	24 550	26 190	27 -170	29 305	30 -55	32 420	33 60	35 535	37 175	38 -185
1320	21 565	23 215	24 -135	26 350	27 0	29 485	31 135	32 -215	34 270	35 -80	37 405	38 55
1330	21 -140	23 355	24 15	26 510	28 170	29 -170	31 325	32 -15	34 480	36 140	37 -200	39 295
1340	21 -10	23 495	25 165	26 -165	28 340	29 10	31 515	33 185	34 -145	36 360	37 30	39 535
1350	22 120	23 -200	25 315	26 -5	28 510	30 190	31 -130	33 385	34 65	36 580	38 260	39 -60
1360	22 250	23 -60	25 465	27 155	28 -155	30 370	31 60	33 585	35 275	36 -35	38 490	40 180
1370	22 380	23 80	25 -220	27 315	28 15	30 550	32 250	33 -50	35 485	37 185	38 -115	40 420
1380	22 510	24 220	25 -70	27 475	29 185	30 -105	32 440	34 150	35 -140	37 405	39 115	40 -175
1390	22 -195	24 360	25 80	27 -200	29 355	30 75	32 -205	34 350	35 70	37 -210	39 345	40 65
1400	22 -65	24 500	26 230	27 -40	29 525	31 255	32 -15	34 550	36 280	37 10	39 575	41 305
1410	22 65	24 -195	26 380	28 120	29 -140	31 435	33 175	34 -85	36 490	38 230	39 -30	41 545
1420	23 195	24 -55	26 530	28 280	29 30	31 -220	33 365	35 115	36 -135	38 450	40 200	41 -50
1430	23 325	24 85	26 -155	28 440	30 200	31 -40	33 555	35 315	36 75	38 -165	40 430	42 190
1440	23 455	25 225	26 -5	28 600	30 370	32 140	33 -90	35 515	37 285	38 55	40 -175	42 430
1450	23 585	25 365	27 145	28 -75	30 540	32 320	33 100	35 -120	37 495	39 275	40 55	42 -165
1460	23 -120	25 505	27 295	28 85	30 -125	32 500	34 290	35 80	37 -130	39 495	41 285	42 75
1470	23 10	25 -190	27 445	29 245	30 45	32 -155	34 480	36 280	37 80	39 -120	41 515	43 315
1480	24 140	25 -50	27 595	29 405	31 215	32 25	34 -165	36 480	38 290	39 100	41 -90	43 555
1490	24 270	25 90	27 -90	29 565	31 385	33 205	34 25	36 -155	38 500	40 320	42 140	43 -40
1500	24 400	26 230	27 60	29 -110	31 555	33 385	35 215	36 45	38 -125	40 540	42 370	44 200
1510	24 530	26 370	28 210	29 50	31 -110	33 565	35 405	37 245	38 85	40 -75	42 600	44 440
1520	24 -175	26 510	28 360	30 210	31 60	33 -90	35 595	37 445	39 295	41 145	42 -5	44 -155
1530	24 -45	26 -185	28 510	30 370	32 230	33 90	35 -50	37 -190	39 505	41 365	43 225	44 85
1540	24 85	26 -45	28 -175	30 530	32 400	34 270	36 140	37 10	39 -120	41 585	43 455	45 325
1550	25 215	26 95	28 -25	30 -145	32 570	34 450	36 330	38 210	39 90	41 -30	43 -150	45 565
1560	25 345	27 235	29 125	30 15	32 -95	34 -205	36 520	38 410	40 300	42 190	43 80	45 -30
1570	25 475	27 375	29 275	31 175	32 75	34 -25	36 -125	38 -225	40 510	42 410	44 310	46 210
1580	25 -230	27 515	29 425	31 335	33 245	35 155	36 65	38 -25	40 -115	42 -205	44 540	46 450
1590	25 -100	27 -180	29 575	31 495	33 415	35 335	37 255	39 175	40 95	42 15	44 -65	46 -145
1600	25 30	27 -40	29 -110	31 -180	33 585	35 515	37 445	39 375	41 305	43 235	45 165	46 95
1610	26 160	27 100	29 40	31 -20	33 -80	35 -140	37 -200	39 575	41 515	43 455	45 395	47 335
1620	26 290	28 240	30 190	32 140	33 90	35 40	37 -10	39 -60	41 -110	43 -160	45 -210	47 575
1630	26 420	28 380	30 340	32 300	34 260	36 220	38 180	40 140	41 100	43 60	45 20	47 -20
1640	26 550	28 520	30 490	32 460	34 430	36 400	38 370	40 340	42 310	44 280	46 250	48 220
1650	26 -155	28 -175	30 -195	32 -215	34 600	36 580	38 560	40 540	42 520	44 500	46 480	48 460
1660	26 -25	28 -35	30 -45	32 -55	34 -65	36 -75	38 -85	40 -95	42 -105	44 -115	46 -125	48 -135
1670	27 105	29 105	31 105	33 105	35 105	37 105	39 105	41 105	43 105	45 105	47 105	49 105
1680	27 235	29 245	31 255	33 265	35 275	37 285	39 295	41 305	43 315	45 325	47 335	49 345
1690	27 365	29 385	31 405	33 425	35 445	37 465	39 485	41 505	43 525	45 545	47 565	49 585
1700	27 495	29 525	31 555	33 585	35 -220	37 -190	39 -160	41 -130	43 -100	45 -70	47 -40	49 -10
1710	27 -210	29 -170	31 -130	33 -90	35 -50	37 -10	39 30	41 70	44 110	46 150	48 190	50 230
1720	27 -80	29 -30	31 20	33 70	36 120	38 170	40 220	42 270	44 320	46 370	48 420	50 470
1730	27 50	30 110	32 170	34 230	36 290	38 350	40 410	42 470	44 530	46 590	48 -185	50 -125
1740	28 180	30 250	32 320	34 390	36 460	38 530	40 600	42 -165	44 -95	46 -25	48 45	51 115
1750	28 310	30 390	32 470	34 550	36 -205	38 -125	40 -45	42 35	45 115	47 195	49 275	51 355
1760	28 440	30 530	32 -215	34 -125	36 -35	38 55	41 145	43 235	45 325	47 415	49 505	51 595
1770	28 570	30 -165	32 -65	34 35	37 135	39 235	41 335	43 435	45 535	47 -200	49 -100	51 0
1780	28 -135	30 -25	32 85	35 195	37 305	39 415	41 525	43 -200	45 -90	47 20	50 130	52 240
1790	28 -5	31 115	33 235	35 355	37 475	39 595	41 -120	43 0	46 120	48 240	50 360	52 480
1800	29 125	31 255	33 385	35 515	37 -190	39 -60	41 70	44 200	46 330	48 460	50 590	52 -115
1810	29 255	31 395	33 535	35 -160	37 -20	40 120	42 260	44 400	46 540	48 -155	50 -15	53 125
1820	29 385	31 535	33 -150	35 0	38 150	40 300	42 450	44 600	46 -85	48 65	51 215	53 365
1830	29 515	31 -160	33 0	36 160	38 320	40 480	42 -195	44 -35	47 125	49 285	51 445	53 -230
1840	29 -190	31 -20	34 150	36 320	38 490	40 -175	42 -5	45 165	47 335	49 505	51 -160	53 10
1850	29 -60	32 120	34 300	36 480	38 -175	40 5	43 185	45 365	47 545	49 -110	51 70	54 250
1860	29 70	32 260	34 450	36 -195	38 -5	41 185	43 375	45 565	47 -80	50 110	52 300	54 490
1870	30 200	32 400	34 600	36 -35	39 165	41 365	43 565	45 -70	48 130	50 330	52 530	54 -105
1880	30 330	32 540	34 -85	37 125	39 335	41 545	43 -80	46 130	48 340	50 550	52 -75	55 135
1890	30 460	32 -155	34 65	37 285	39 505	41 -110	44 110	46 330	48 550	50 -65	53 155	55 375
1900	30 590	32 -15	35 215	37 445	39 -160	41 70	44 300	46 530	48 -75	51 155	53 385	55 -220
1910	30 -115	33 125	35 365	37 -230	39 10	42 250	44 490	46 -105	49 135	51 375	53 -220	55 20
1920	30 15	33 265	35 515	37 -70	40 180	42 430	44 -155	46 95	49 345	51 595	53 10	56 260
1930	31 145	33 405	35 -170	37 90	40 350	42 -225	44 35	47 295	49 555	51 -20	54 240	56 500
1940	31 275	33 545	35 -20	38 250	40 520	42 -45	45 225	47 495	49 -70	52 200	54 470	56 -95
1950	31 405	33 -150	36 130	38 410	40 -145	43 135	45 415	47 -140	50 140	52 420	54 -135	57 145
1960	31 535	33 -10	36 280	38 570	40 25	43 315	45 -230	47 60	50 350	52 -195	54 95	57 385
1970	31 -170	34 130	36 430	38 -105	41 195	43 495	45 -40	48 260	50 560	52 25	55 325	57 -210
1980	31 -40	34 270	36 580	38 55	41 365	43 -160	46 150	48 460	50 -65	53 245	55 555	57 30
1990	31 90	34 410	36 -105	39 215	41 535	43 20	46 340	48 -175	51 145	53 465	55 -50	58 270
2000	32 220	34 550	36 45	39 375	41 -130	44 200	46 530	48 25	51 355	53 -150	56 180	58 510

Table 2: Clamp and spacers number VS PV Panel Thicknesses

PV Panel Thickness (mm)	Clamp Size (mm)	Number of Spacers
35	35	0
36	35	0
37	35	1
38	38	0
39	38	0
40	40	0
41	40	0
42	40	1
43	40	2
44	40	2
45	45	0
46	45	0
47	45	1
48	45	2
49	45	2
50	50	0

Product Specifications

Compatible PV panel dimensions:

X-direction:	Any PV panel length
Y-direction:	960 – 1060 mm
Depth :	34 – 50mm

Average modular unit area:	1.497 m ²
Average full SunMount area (2 units interlock):	2.80 m ²
Average weight of full SunMount:	9.53 kg
Average roof loading with PV module:	10 kg/m ²
SunMount tilt angle:	10 ⁰ for best ratio of power generation to surface area exploitation for European climate.
Maximum certified wind speed uplift resistance:	110 mph
SunMount Material:	Recycled Polypropylene UV stabilised.
Product life guarantee:	20 years.
Transport:	50 USM units (minimum 6.25kW _p) per double size pallet
PV cable connection:	Easy cabling connection/disconnection can be carried out from the top and placed in recesses with covering strips.
Aesthetics:	Flush modules give an integrated appearance.
Interlocking method:	Left to right interlock by latches and with
Overlapping	of front to back.